

1. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Perpendicular to $8x + 7y = 15$ and passing through the point $(3, -8)$.

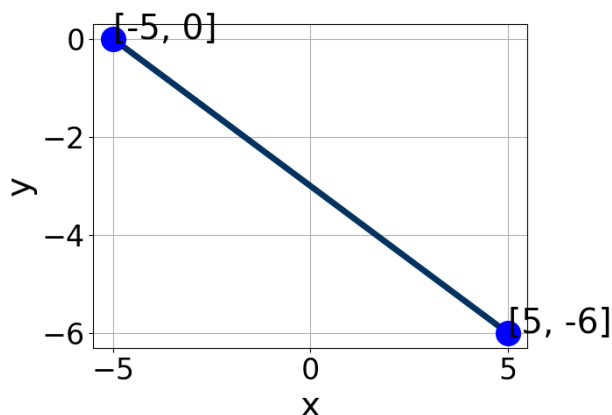
- A. $m \in [-0.92, -0.76]$ $b \in [-6.66, -5.11]$
 - B. $m \in [0.74, 1.04]$ $b \in [9.9, 11.01]$
 - C. $m \in [0.74, 1.04]$ $b \in [-10.91, -9.65]$
 - D. $m \in [1.02, 1.16]$ $b \in [-10.91, -9.65]$
 - E. $m \in [0.74, 1.04]$ $b \in [-11.81, -10.68]$
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2. Solve the equation below. Then, choose the interval that contains the solution.

$$-13(-8x - 16) = -10(2x + 19)$$

- A. $x \in [-3.24, -3.16]$
 - B. $x \in [0.01, 0.16]$
 - C. $x \in [-0.21, -0.14]$
 - D. $x \in [-0.26, -0.2]$
 - E. There are no real solutions.
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3. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



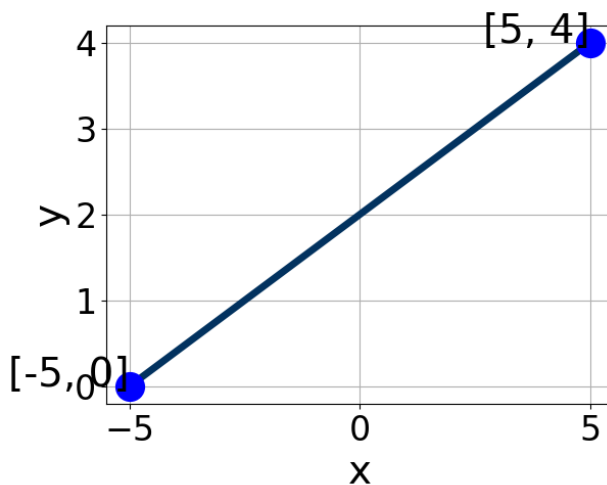
- A. $A \in [0, 2.7]$, $B \in [-4, 0.2]$, and $C \in [1, 8]$
 - B. $A \in [-3.6, -2.9]$, $B \in [-5.5, -3.2]$, and $C \in [13, 18]$
 - C. $A \in [0.8, 3.7]$, $B \in [-5.5, -3.2]$, and $C \in [13, 18]$
 - D. $A \in [0, 2.7]$, $B \in [-0.2, 2]$, and $C \in [-12, 1]$
 - E. $A \in [0.8, 3.7]$, $B \in [3.3, 6]$, and $C \in [-15, -13]$
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4. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Parallel to $5x - 9y = 12$ and passing through the point $(-7, -8)$.

- A. $m \in [-0.28, 0.66]$ $b \in [-6.11, -3.11]$
 - B. $m \in [-0.99, 0.16]$ $b \in [-18.89, -10.89]$
 - C. $m \in [-0.28, 0.66]$ $b \in [-3, 2]$
 - D. $m \in [1.69, 2.14]$ $b \in [-6.11, -3.11]$
 - E. $m \in [-0.28, 0.66]$ $b \in [2.11, 7.11]$
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5. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



- A. $A \in [-0.63, 1.12]$, $B \in [-0.2, 2.36]$, and $C \in [1, 6]$

- B. $A \in [1.99, 4.03]$, $B \in [-5.17, -4.42]$, and $C \in [-12, -6]$
C. $A \in [1.99, 4.03]$, $B \in [3.95, 6]$, and $C \in [5, 17]$
D. $A \in [-2.3, -1.15]$, $B \in [3.95, 6]$, and $C \in [5, 17]$
E. $A \in [-0.63, 1.12]$, $B \in [-1.75, 0.36]$, and $C \in [-4, 1]$
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6. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{4x - 3}{3} - \frac{6x + 7}{5} = \frac{3x - 9}{2}$$

- A. $x \in [-0.13, 0.75]$
B. $x \in [-1.8, -0.58]$
C. $x \in [2.51, 3.64]$
D. $x \in [0.71, 1.83]$
E. There are no real solutions.
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7. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals that contain m and b .

$(-4, 9)$ and $(4, 3)$

- A. $m \in [-2.1, -0.3]$ $b \in [4.1, 7.43]$
B. $m \in [-2.1, -0.3]$ $b \in [-1.77, -0.34]$
C. $m \in [0.2, 2.7]$ $b \in [-0.68, 0.44]$
D. $m \in [-2.1, -0.3]$ $b \in [-7.52, -3.78]$
E. $m \in [-2.1, -0.3]$ $b \in [12.59, 13.66]$
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8. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{-7x + 7}{2} - \frac{-4x + 9}{3} = \frac{-5x - 7}{7}$$

- A. $x \in [-2.2, 0.9]$
 - B. $x \in [1.4, 3.9]$
 - C. $x \in [0.7, 2.3]$
 - D. $x \in [5.1, 6]$
 - E. There are no real solutions.
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9. Solve the equation below. Then, choose the interval that contains the solution.

$$-6(-18x + 3) = -10(-15x + 19)$$

- A. $x \in [4.67, 5.4]$
 - B. $x \in [0.28, 1.26]$
 - C. $x \in [2.94, 4.46]$
 - D. $x \in [-6.68, -4.65]$
 - E. There are no real solutions.
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10. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals that contain m and b .

$$(9, -10) \text{ and } (3, 11)$$

- A. $m \in [-4.5, -1.5]$ $b \in [-21.5, -20.5]$
 - B. $m \in [-4.5, -1.5]$ $b \in [-20, -18]$
 - C. $m \in [-4.5, -1.5]$ $b \in [16.5, 24.5]$
 - D. $m \in [-4.5, -1.5]$ $b \in [5, 16]$
 - E. $m \in [-2.5, 12.5]$ $b \in [0.5, 2.5]$
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